

IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF WISCONSIN

DOUGLAS DYNAMICS, LLC,

Plaintiff,

v.

OPINION AND ORDER

09-cv-261-bbc

BUYERS PRODUCTS COMPANY,

Defendant.

This is a patent infringement lawsuit in which plaintiff Douglas Dynamics, LLC alleges that defendant Buyers Products Company is infringing five of plaintiff's patents relating to snow plows. On November 17, 2009, I granted the parties' motions to construe 16 claim terms and denied their request for a court hearing. Dkt. #81. Now before the court is the question of the construction of the 16 claim terms.

All five patents-in-suit relate to snow plow attachments for vehicles. United States Patent No. 4,999,935 (the '935 patent) covers a "Hydraulic System and Apparatus for use with Vehicle Accessory Units." More specifically, the patent "relates to a hydraulic system for a vehicle mounted, power operated plow blade." '935 pat., Abstract. United States Patent No. 5,420,480 (the '480 patent) covers an "Automatic Headlamp Switching System."

United States Patent No. Re. 35,700 (the '700 patent) covers a "Removable Snowplow Assembly with Pivotable Lift Stand." United States Patent No. 5,353,530 (the '530 patent) covers a "Quick Mounting Snow Plow Assembly." United States Patent No. 6,944,978 (the '978 patent) covers a "Snowplow and Mount Assembly."

Before construing the terms, I must address defendant's request to exclude from consideration the opinions of plaintiff's expert, Dr. Charles Garris. Defendant contends that it was sandbagged by Garris's opinion on claim terms. Regardless whether plaintiff's actions amount to sandbagging, none of its actions require the exclusion of Garris's opinions. First, the Preliminary Pretrial Conference Order, dkt. #11, does not require disclosure of experts until February 26, 2010. Plaintiff need not disclose an expert witness until the time ordered by the court. Fed. R. Civ. P. 26(a)(2)(C). Plaintiff's disclosure of Garris at the end of October 2009 was well before the court ordered disclosure date.

Defendant also contends that plaintiff changed its claims construction right before the deadline for proposed constructions, but those changes were necessitated by defendant's noninfringement arguments. Further, it is not improper to alter a proposed construction in response to an opposing party's contentions. Although plaintiff had to produce a claims chart by August 21, 2009, it was not required to disclose its proposed construction of disputed terms until October 26, 2009. It did just that. Accordingly, defendant's request that Garris's testimony and opinions be excluded will be denied.

From the parties' briefs, the patent claims, patent specification and prosecution history, I conclude that judicial construction of six terms is warranted.

OPINION

A. Claims Construction Standards

When construing claims, the starting point is the so-called intrinsic evidence: the claims themselves, the patent specification and the prosecution history. Teleflex, Inc. v. Ficosa North America Corp., 299 F.3d 1313, 1325 (Fed. Cir. 2002). Examination of the claims' language is the starting point for the well established process of claim construction. "Claim construction must adhere carefully to the precise language of the claims that the patent [examiner] has allowed." Ardisam, Inc. v. Ameristep, Inc., 336 F. Supp. 2d 867, 879 (W.D. Wis. 2004) (citing Autogiro Co. of America v. United States, 384 F.2d 391, 396 (Ct. Cl. 1967)). The language is to be construed as it would be understood by one of ordinary skill in the relevant art, given its context and the other patent claims. Rexnord Corp. v. Laitram Corp., 274 F.3d 1336, 1342 (Fed. Cir. 2001). Moreover, district courts must remain aware that "[t]he patent applicant may not have used words consistent with the dictionary definition because an applicant can act as his or her own lexicographer or may disavow or disclaim aspects of a definition 'by using words or expression of manifest exclusion or restriction, representing a clear disavowal of claim scope.'" Ardisam, 336 F.

Supp. 2d at 879-80 (quoting Golight, Inc. v. Wal-Mart Stores, Inc., 355 F.3d 1327, 1331 (Fed. Cir. 2004)).

This initial construction is then considered in light of the specification to determine whether the inventor expressed a different meaning for the language, whether the preferred embodiment is consistent with the initial interpretation and whether the inventor specifically disclaimed certain subject matter. Rexnord, 274 F.3d at 1342-43. The specification contains a written description of the invention that is meant to help explain the invention and possibly define claim terms, Markman v. Westview Instruments, Inc., 52 F.3d 967, 979 (Fed. Cir. 1995), but as a general rule, “limitations from the specification are not to be read into the claims.” Golight, 355 F.3d at 1331. Finally, the interpretation is examined for consistency with the patent’s prosecution history and any disclaimers made therein. Rexnord, 274 F.3d at 1343.

Last, a court may consult extrinsic evidence, such as dictionaries, treatises and expert testimony for background information and to “shed useful light on relevant art.” Phillips v. AWH Corp., 415 F.3d 1303, 1317 (Fed. Cir. 2005) (internal citations omitted). In general, this type of evidence is less reliable than intrinsic evidence in determining the meaning of claim terms and is “unlikely to result in a reliable interpretation of patent claim scope unless considered in the context of the intrinsic evidence.” Id. at 1318-19.

B. Means-Plus-Function Limitations

Construing claims containing means-plus-function limitations requires a slightly different process because such claims fall under an exception to the general rule about not reading limitations from the specification into the claims. According to 35 U.S.C. § 112 ¶6,

An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

In other words, if a claim includes a function but fails to identify the structure that performs the function, the structure is limited to the examples provided in the specification.

Construction of a means-plus-function limitation involves a two-step analysis. First, the claimed function must be identified. Omega Engineering, Inc. v. Raytek Corp., 334 F.3d 1314, 1321 (Fed. Cir. 2003). “Ordinary principles of claim construction govern interpretation of the claim language used to describe the function.” Cardiac Pacemakers, Inc. v. St. Jude Medical, Inc., 296 F.3d 1106, 1113 (Fed. Cir. 2002). For example, “it is improper to restrict a means-plus-function limitation by adopting a function different from that explicitly recited in the claim.” Creo Products, Inc. v. Presstek, Inc., 305 F.3d 1337, 1346 (Fed. Cir. 2002). In other words, “[t]he court must construe the function . . . to include the limitations contained in the claim language, and only those limitations.” Cardiac Pacemakers, 296 F.3d at 1113. Second, the court must “ascertain the corresponding

structures in the written description that perform those functions.” Omega Engineering, 334 F.3d at 1321. “[T]o qualify as corresponding, the structure must not only perform the claimed function, but the specification must clearly associate the structure with performance of the function.” Cardiac Pacemakers, 296 F.3d at 1113. “In other words, the structure must be necessary to perform the claimed function.” Omega Engineering, 334 F.3d at 1321.

In determining whether an element falls under § 112, ¶6, “[u]se of the word ‘means’ in claim language creates a presumption that § 112, ¶6 applies.” TriMed, Inc. v. Stryker Corp., 514 F.3d 1256, 1259 (Fed. Cir. 2008). However, the presumption is not conclusive. Sage Products, Inc. v. Devon Industries, Inc., 126 F.3d 1420, 1427 (Fed. Cir. 1997). If “the claim recites sufficient structure for performing the described functions in their entirety, the presumption of § 112 ¶6 is overcome—the limitation is not a means-plus-function limitation.” TriMed, 514 F.3d at 1259. Further, the presumption is overcome even when the element contains the word “means” if the claim fails to specify a corresponding function for the “means.” Sage Products, Inc., 126 F.3d at 1427.

C. The ‘935 Patent

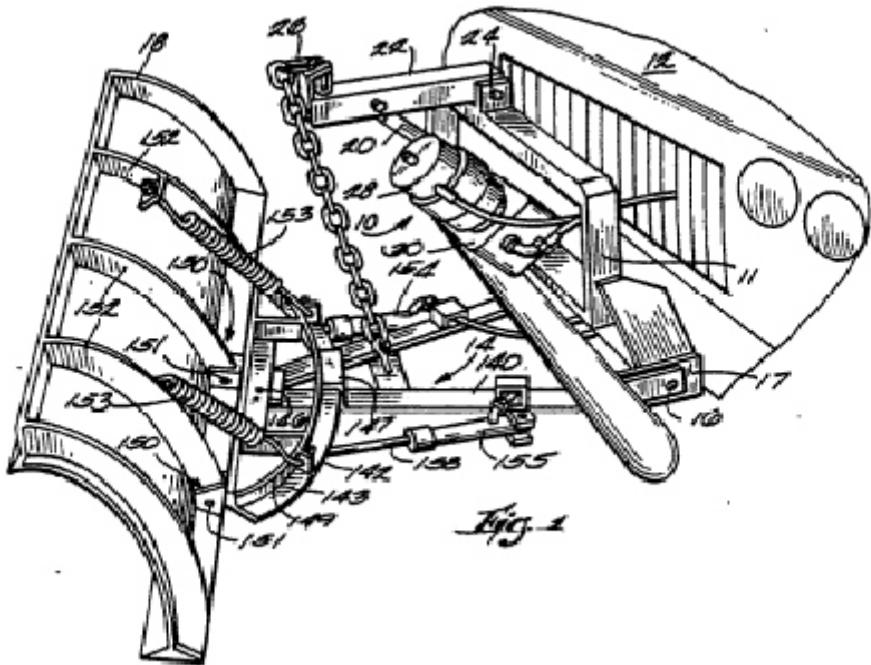
1. Means for mounting said plow blade for vertical movement and horizontal movement

The parties agree that the term “means for mounting said plow blade for vertical movement and horizontal movement” as used in claim 1 of the ‘935 patent is a means-plus-

function limitation to which § 112 ¶6 applies. The parties further agree that the claimed function is the mounting of the plow blade for vertical and horizontal movement. They disagree about what structures in the specification correspond to the claimed function.

Because the corresponding structures depend on the claimed function, it is helpful to look more closely at the precise function. Thus, although I agree with the parties' general description of the function, further explanation is necessary. It is clear from the claim language that "mounting the plow blade" merely means attaching the plow blade to the vehicle. The claim language contains an additional limitation on how the plow blade must be attached, which is that the attachment must permit vertical and horizontal movement. Thus, I find that the claimed function is **attaching the plow blade to the vehicle in a manner that permits vertical and horizontal movement.**

To find the corresponding structure or structures, one must look for structures "clearly linked or associated" with the claimed function. Medtronic, Inc. v. Advanced Cardiovascular Systems, Inc., 248 F.3d 1303, 1311 (Fed. Cir. 2001). Figure 1 in the '935 patent illustrates a snow plow blade mounted or attached to a vehicle:



The description of Figure 1 provides an explanation about how the plow blade is attached and how it moves vertically and horizontally:

Frame 14 is pivotally connected by pins 16 (only one visible in the drawing) to an extension 17 attached to the vehicle frame (not shown) and supports a snowplow blade 18 for movement about vertical and horizontal axes in a manner to be described more completely hereinafter. Vertical movement of plow blade 18 about a horizontal axes [sic] defined by pins 16 is achieved by movement of ram 20 of hydraulic cylinder provided as part of power unit. Ram 20 is connected to frame 14 through a lever arm 22 which is in turn pivotally connected to frame 11 by pivot pin 24. Lever arm 22 is connected to frame 14 by chain 26.

....

The system is capable of producing horizontal movement of snowplow blade

18. In this connection, frame 14 includes an A-frame portion 140 which is pivotally connected by pins 16 to extension 17 and an arcuate frame portion 142 connected to plow blade 18. Frame portion 142 is connected to and pivots relative to the A-frame about a vertical pivot axis defined by pin 146. . . . Hydraulic cylinders 154 and 155 are connected between frame portion 142 and the A-frame and operation of these hydraulic cylinders is effective to pivot the plow blade horizontally about pin 146 to a desired plowing angle.

‘935 pat., col. 2, lns. 54-65 and col. 3, lns. 12-31. According to the description, the “clearly linked or associated” structures [with attaching the plow blade to the vehicle in a manner that permits vertical and horizontal movement] are (1) a **frame 14** that includes an **A-frame 140** and an **additional frame portion 142** attached to the plow blade using a **pin 146** and attached to the vehicle using **pins 16 and 24**; (2) an **extension 17**; a **chain 26**; and a **lever arm 22**. (I include the numbers from Figure 1 solely to provide a visual example of the structures. It is not necessary that the corresponding structures look like their visual counterpart.)

Plaintiff contends that the **pin 24**, **chain 26** and **lever arm 22** should not be structures included in construction of the claim because they are part of the function (moving the plow blade vertically). Plaintiff is correct that the pin, chain and lever arm are used to move the plow blade vertically. However, structures may perform more than one function, as the pin, chain and lever arm do. Medtronic, Inc., 248 F.3d at 1313. Besides actually moving the plow blade, those structures are necessary to mount the plow blade in a manner that will permit vertical movement. Without attaching the frame 14 to the lever arm 22 using a

chain **26** and to the vehicle using a pin **24**, the plow blade would not move vertically.

Defendant contends that several additional structures should be included in the construction: the additional frame portion **142** must be an arcuate frame and the ram **20** that raises and lowers the lever arm should be included along with the hydraulic cylinders **154** and **155** that move the plow blade horizontally. With respect to the additional frame portion, although the specification refers initially to the frame portion associated with number **142** in Figure 1 as the “arcuate frame” portion, additional references to **142** cite only the “frame portion” when explaining how the plow blade pivots horizontally. ‘935 pat., col. 3, lns. 15, 17 and 28. Additional use of the term “arcuate” in the specification is linked to “pivotal movement of the plow blade in the event the blade should strike an obstruction such as a rock or the like.” Id., col. 3, lns. 19 and 25. Nothing in the specification or claim language suggests that the additional frame portion must be arcuate to permit horizontal movement of the plow blade. Simply put, the arcuate shape of the additional frame is not clearly linked to the claimed function. Thus, the additional frame portion need not be arcuate to accomplish the claimed function.

The ram is another structure not clearly linked to the claimed function. The ram produces vertical movement of the plow blade and connects the lift unit to the plow blade so that the plow blade can move vertically. Id., col. 2, lns. 59-62. The same is true for the hydraulic cylinders except that they produce horizontal plow blade movement. However,

neither the ram nor the hydraulic cylinders are used for *mounting* the plow blade to the vehicle to permit vertical or horizontal movement, which is the claimed function. Because the additional structures that defendant identifies are not clearly linked or associated with the claimed function, its proposed construction of the claim term fails.

2. A hydraulic power unit

I conclude that the term “a hydraulic power unit” as used in claim 1 of the ‘935 patent means **a group of hydraulic components, including a hydraulic fluid reservoir, a pump and lift hydraulic cylinder.** The parties dispute whether the claim term should be construed to be a “unitary” hydraulic power system. I agree with plaintiff that adding the word “unitary” to describe the hydraulic components adds nothing but confusion to the construction of the term and would be an improper reading of a limitation from the specification into the claim.

Defendant contends that referring to the hydraulic components as “a unitary hydraulic power system formed on a base” merely defines “unit” as the term is used in claim 1. (It maintains that its plows lack a “unitary hydraulic power unit.” Def.’s Br., dkt. #72, at 20.) However, defendant’s reference to a “unitary hydraulic power unit” makes it clear that “unitary” is intended to express something in addition to “unit.” The additional something expressed by the use of the word “unitary” is the concept of locating the hydraulic

components on the same base or confining them to a single structure.

Defendant cites the Summary of the Invention in the specification to support its contention. Therein lies the problem. “[L]imitations from the specification are not to be read into the claims.” Golight, 355 F.3d at 1331. The specification provides a preferred embodiment, but the scope of the claim term depends on the claim and not a preferred embodiment. Kara Technology Inc. v. Stamps.com Inc., 582 F.3d 1341, 1347 (Fed. Cir. 2009) (“The claims, not specification embodiments, define the scope of patent protection.”). Nothing in the patent suggests that the patentee was acting as his own lexicographer or disavowing claim scope when he used the term “unit.” Patentees are not required to provide an example of every embodiment of a claimed structure in a patent’s specification. By itself, the disclosure of only one embodiment does not justify limiting a claim’s scope to that single disclosed embodiment. Abbott Laboratories v. Sandoz, Inc., 566 F.3d 1282, 1290 (Fed. Cir. 2009). Thus, although the hydraulic power unit as claimed in the patent requires certain hydraulic components, the claim does not require locating those components on the same base. In other words, nothing in the patent limits the hydraulic power unit to a unitary system as defendant has proposed.

In addition to its unitary argument, defendant contends that a proper construction of a hydraulic power unit should state that it does not include the manifold. Such an addition is unnecessary. Claim 1 recites “said manifold connected to and mounted on said

hydraulic power unit.” ‘935 pat., col. 6, lns. 62-63. This portion of the claim makes it clear that although the manifold is separate from the hydraulic power unit, it must be connected to and mounted on it. Therefore, it would be superfluous to say that the manifold is not included in the construction of “a hydraulic power unit.”

3. Manifold connected to and mounted on said hydraulic power unit

I conclude that “manifold connected to and mounted on said hydraulic power unit” as used in claim 1 of the ‘935 patent does not need construction. Its plain and ordinary meaning is easily discernible from the claim language. Nothing in either party’s proposed construction is necessary to elaborate the term; nothing in the claim language or the specification necessitates a special definition. Therefore, the plain and ordinary meaning controls. Northern Telecom Ltd. v. Samsung Electrics Co., 215 F.3d 1281, 1295 (Fed. Cir. 2000).

4. Means defining fluid flow passages in said manifold

The parties dispute whether “means defining fluid flow passages in said manifold” as used in claim 1 of the ‘935 patent is a means-plus-function limitation. The claim’s use of the word “means” raises the presumption that the limitation is means-plus-function, but plaintiff contends that the claim language provides sufficient structure to overcome the

presumption, placing the limitation outside the scope of § 112 ¶6. I disagree.

In plaintiff's view, the fluid flow passages are a structure and there cannot be a more specific structure to perform the function of defining fluid flow passages that communicate with hydraulic cylinders. However, a fluid flow passage is not a self-defining term. It is necessary to have some other structure or structures to create fluid flow passages that communicate with the hydraulic cylinder means as claimed in claim 1. Therefore, the term is properly constructed as a means-plus-function limitation.

In construing the term, it is helpful to read it in context: a manifold including means defining fluid flow passages in said manifold communicating with said hydraulic cylinder means. '935 pat., col. 6, lns. 56-58. According to the claim language the term's function is **defining fluid flow passages that communicate with the hydraulic cylinder means.** Defendant includes an additional function in its proposed construction. I understand defendant to contend that the function should include communicating with the solenoid valve means and being operative to selectively direct fluid to said lift hydraulic cylinder means and angle hydraulic cylinder means. Defendant is mistaken in its reading of the claim language. Although the language is somewhat muddled, it is clear that the solenoid valve means is a part of the manifold, separate from the means defining fluid flow passages. A plain reading of the claim language establishes that although a solenoid valve means is located within the structures establishing the fluid flow passages, it is the solenoid valve

means that selectively directs fluid and not the fluid flow passages.

With the claimed function defined, the next step is determining the corresponding structures. Defendant contends that the corresponding structures are all the valving, ports, flow channels and ancillary mechanisms in the manifold, as identified in Figures 3A, 3B and 4 through 7. Defendant's proposed construction includes too much. The specification states that "Figs. 3A and 3B show the actual structural relationships within the valve manifold, i.e., valves, ports and flow channels." Id., col. 5, lns. 34-36. According to the claim language, the manifold includes both a means defining fluid flow passages and a solenoid valve means. Id., col. 6, lns. 56-61. Thus, despite defendant's contention to the contrary, not everything pictured in Figures 3A or 3B is associated with the means defining fluid flow passages.

Nonetheless, many of the structures identified in Figures 3A, 3B and 4 through 7 are the only structures linked to defining fluid flow passages that communicate with hydraulic fluid cylinders. When there is only one embodiment of a structure linked or associated with a claimed function, the claimed function is limited to that embodiment of the structure and its equivalents. E.g., Cross Medical Products, Inc. v. Medtronic Sofamor Danek, Inc., 424 F.3d 1293, 1304 (Fed. Cir. 2005) ("because there is only one embodiment described in the specification . . . there is no basis on which to extend the limitation to cover alternative, non-disclosed structures not shown to be structurally equivalent").

Figure 3A, provided below, is an illustration of the entire manifold, which includes

the structures for executing the claimed function.

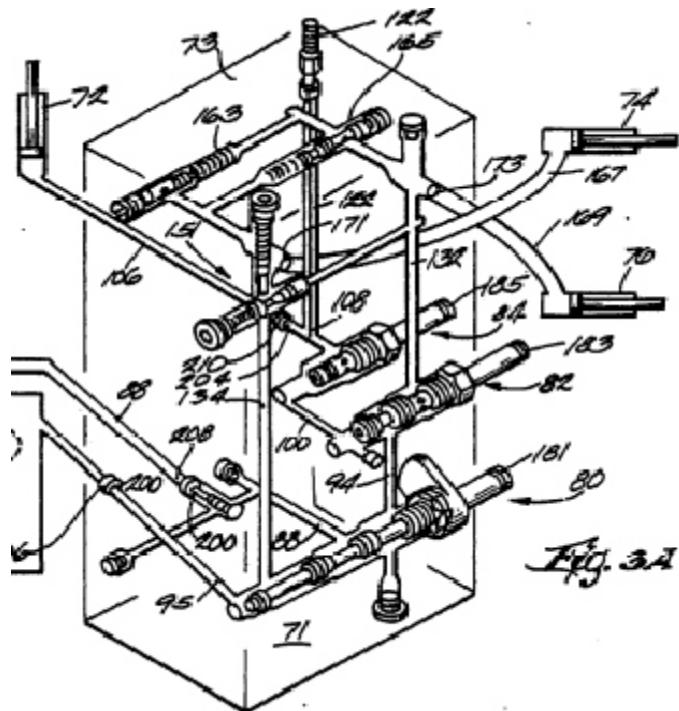
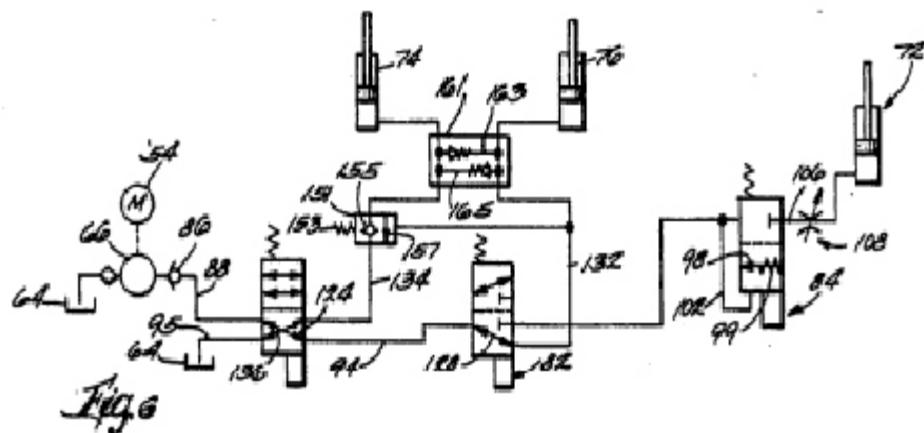


Figure 6, provided below, illustrates the flow path to the right angle hydraulic cylinder 76.



The structures that define fluid flow passages that communicate with both the lift 72 and angled 74 and 76 hydraulic cylinders are **those shown in Figures 3A, 3B and 4 through 7 and listed in column 5, lines 38 through 68 and column 6, lines 1 through 11 and their equivalents**. For example, hydraulic conduits 167 and 169, ports 200, 202 and 204, passages 88, 94 and 100 and valves 80, 82 and 84 are clearly associated with performance of the claimed function. E.g., '935 pat., col. 5, lns. 38-60. They all play a necessary role in defining the fluid passages used to communicate with the hydraulic cylinders. E.g., id., col 5, lns. 53-60, 61-64 and 65-col. 6, ln. 1 ("fluid flows from reservoir . . . through passage . . . to pressurize cylinder 72"; "fluid returns through passage"; and "the flow path is again to the four way valve through passage . . . to pressurize cylinder 76").

Plaintiff contends that channels are the only structure necessary for performing the claimed function and that to require more would be reading limitations from the specification into the claim. Plaintiff would be correct but for the fact that the general rule against reading limitations from the specification into claims does not apply to means-plus-function limitations. A patentee's decision to use a means-plus-function limitation carries a price: "use of that convenience is limitation of the claim to the means specified in the written description and equivalents thereof." Texas Digital Systems, Inc. v Telegenix, Inc., 308 F.3d 1193, 1208 (Fed. Cir. 2002) (quoting O.I. Corp. v. Tekmar Co., 115 F.3d 1576, 1583 (Fed. Cir. 1997)). Defining fluid flow passages that communicate with hydraulic

cylinders requires more than channels according to the specification. Without conduits, ports and valves, there would be a connection but no communication. Those structures are necessary for the communication aspect of the claimed function, which means that plaintiff's proposed construction is incorrect.

I conclude that "means defining fluid flow passages in said manifold" is a means plus function limitation. Its function is to define fluid flow passages that communicate with the hydraulic cylinder means. The structures clearly linked to performing that function are provided in Figures 3A, 3B and 4 through 7, which includes hydraulic conduits, ports, passages and valves.

D. The '480 Patent

1. Switching means

The parties agree that the term "switching means" as used in claims 7 and 18 of the '480 patent is a means-plus-function limitation to which § 112 ¶6 applies. The first step in construing "switching means" is to define the claimed function, which is different in the separate independent claims. According to claim 7, the claimed function is to **interrupt the primary circuit and connect the secondary light circuit to the energy source so that the secondary light source is selectively energizable and the primary circuit is de-**

energized. According to claim 18, the claimed function is to **interrupt the primary circuit and connect the energy source to the secondary light source so that the secondary light source is selectively energizable in response to the switch.**

The next step is to identify the structures in the specification that are clearly linked to performing the claimed functions. The specification does not refer to a “switching means” but it does identify a “second switch means” that performs the claimed function. ‘480 pat., col. 1, lns. 62-66; col. 4, lns. 23-26 (“the second switch means **144** interrupts the primary circuit **46** and simultaneously completes the secondary circuit **76** thus illuminating the snowplow headlamps”). The specification provides one embodiment of the second switch means:

The second switch means **144** in the preferred embodiment constitutes a first relay **146** and a second relay **148**. The first and second relays **146** and **148** respectively are of the single pole double throw (SPDT) type.

Id., col. 4, lns. 33-36. Although the functions vary slightly, the structures corresponding to the functions are the same. Thus, the structures that engage in the claimed functions are **first and second relays of a single pole double throw type and their equivalents.**

Defendant seeks to add information to the corresponding structure about how the structures are energized. Such an addition would be improper. How the structures are energized is something left for the claim language. E.g., id., col. 9, ln. 64 (“switching means automatically activated when . . .”); col. 12, lns. 22-23 (“selectively energizable in response

to said switch"). These claim requirements regarding the "switching means" need not be incorporated into the structures corresponding to the claimed function.

Plaintiff contends that requiring the relays to be single pole double throw is improper because that limitation is found only in the specification. However, as explained before, when a patentee chooses to use a means-plus-function limitation in a claim, the claim is limited to the means specified in the written description and its equivalents. Texas Digital Systems, Inc., 308 F.3d at 1208. Therefore, the limitations on structure set forth in the specification properly limit "switching means" in claims 7 and 18.

2. Switch

I conclude that the term "switch" as used in claims 7 and 18 of the '480 patent does not need construction because its plain and ordinary meaning is easily discernible from the claim language. The term is clear and nothing in the claim language or the specification necessitates a special definition. Therefore, the plain and ordinary meaning controls. Northern Telecom Ltd. v. Samsung Electrics Co., 215 F.3d 1281, 1295 (Fed. Cir. 2000). I note that in its proposed construction, defendant seeks to impose limitations from the specification that do not appear in the claim itself, such as a low and high beam selector. Such a construction would be improper. Golight, 355 F.3d at 1331 ("[L]imitations from the specification are not to be read into the claims.").

3. First switch means

The parties dispute whether the term “first switch means” as used in claims 1, 2, 9 and 16 of the ‘480 patent is a means-plus-function limitation. The claims’ use of the word “means” raises the presumption that the limitation is means-plus-function. Plaintiff contends that the word “switch” provides sufficient structure to overcome the presumption, placing the limitation outside the scope of § 112 ¶6. Plaintiff is mistaken.

A claim using the word “means” provides sufficient structure when “claim language specifies a specific physical structure that performs the function.” Altiris, Inc. v. Symantec Corp., 318 F.3d 1363, 1376 (Fed. Cir. 2003). For example, in Cole v. Kimberly-Clark Corp., 102 F.3d 524, 531 (Fed. Cir. 1996), the Court of Appeals for the Federal Circuit found that the term “perforation means . . . for tearing” was not a means-plus-function limitation because the claim language “describe[d] the structure supporting the tearing function (i.e., perforations)[,] . . . its location (extending from the leg band to the waist band) and extent (extending through the outer impermeable layer).” The appellate court reasoned that “[a]n element with such a detailed recitation of its structure, as opposed to its function, cannot meet the requirements of [§ 112 ¶6].” Id. Also, in Envirco Corp. v. Clestra Cleanroom, Inc., 209 F.3d 1360, 1365 (Fed. Cir. 2000), the Court of Appeals for the Federal Circuit found that the term “second baffle means” was not a means-plus-function limitation because “the term ‘baffle’ itself impart[ed] structure, meaning a surface which deflects air”

and “the claims describe[d] the particular structure of th[at] particular baffle (‘having inner surfaces for directing airflow . . . radially outward . . . and between said first baffle means and said air filter means’).”

Plaintiff contends that like perforation means or second baffle means, first switch means identifies a sufficient structure to overcome the means-plus-function presumption. However, the claim language in the ‘480 patent is readily distinguishable from the claim language in both Cole and Envirco because it does not describe the specific physical structure corresponding to the first switch means.

In claim one, the term is described as

a first switch means for connecting said energy source and said primary light source so that when said first switch means is activated said primary light source is selectively illuminated

‘480 pat., col. 8, lns. 48-52. Plaintiff is correct in noting that the word “switch” can define a device that takes its name from the function it performs. E.g., Greenberg v. Ethicon Endo-Surgery, Inc., 91 F.3d 1580, 1583 (Fed. Cir. 1996) (examples: “filter, brake, clamp, screwdriver or lock”). One definition of “switch” is “a device for making and breaking the connection in an electric circuit.” New Oxford American Dictionary 1709 (2d ed. 2005). Nonetheless, the general structure expressed by the word “switch” is not sufficient by itself to defeat the means-plus-function presumption.

In both Cole and Envirco the claim language provided more than a term that

expressed structure; it contained additional details about the physical structure that performed the claimed function. In Cole, 102 F.3d at 531, in addition to the term “perforation means,” the claim language defined the location, “extending from . . .”, and extent, “extending through . . .”, of the perforation. Id. In Envirco, 209 F.3d at 1365, the claim language did not merely state the term “second baffle means” and its function, but it described the claimed baffle, “having inner surfaces . . .”, and its location, “between . . .”. Id. The claim language accompanying “first switch means” does not provide the additional, structure-specific details found in either Cole or Envirco. It does not give the location of the first switch or any detail about the type of switch. It provides a structurally related term associated with a function, but no additional structural details.

Plaintiff disagrees, contending that the claim language in claim 1 provides the location of the “first switch means” and additional detail about it: the first switch means is located between the energy source and primary light source because it connects those sources. Although the first switch means connects the energy and primary light sources, this connection does not mean that the first switch means is physically located between the two sources or even that the elements are close in proximity. Because wires are used to transfer electricity from the energy source to the light source, the first switch means could be physically located to the left of both sources, while still connecting the sources. Plaintiff also contends that the claim language provides the additional detail that the switch has two

positions, activated and deactivated, because the languages says that it can be activated. However, this is not an additional detail about the first switch means. To be a “switch” the structure, at a minimum, must have two positions, otherwise it would not be a switch. E.g., Overhead Door Corp. v. Chamberlain Group, Inc., 194 F.3d 1261, 1267 (Fed. Cir. 1999) (“‘switch’ connot[es] a mechanical device with different settings, such as ‘on’ or ‘off’”). Saying that a switch can be activated does not provide any additional detail about the structure than the word “switch” does on its own.

When used with the word “means,” the word “switch” is not sufficient to overcome the means-plus-function presumption. Plaintiff’s citation to district court cases in which the term “switch means” was found to denote sufficient structure on its own does not persuade me to find the same. E.g., General Creation LLC v. Leapfrog Enterprises, Inc., 232 F. Supp. 2d 661 (W.D. Va. 2002) (“Because the term ‘switch’ itself imparts structure, its use rebuts the presumption that § 112 ¶6, applies.”). Other courts have construed the term “switch means” to be a means-plus-function limitation when there is no additional structure provided. E.g., Overhead Door Corp., 194 F.3d at 1271 (“Claim 5 recites a ‘memory selection second switch means being adapted to select a first position . . . and . . . a second position.’ Because this claim element utilizes the term ‘means’ and the claim does not specify any structure or material for performing the recited function, the district court properly held ‘memory selection second switch means’ is a means-plus-function element

under 35 U.S.C. § 112, ¶6.”).

Finally, this is not a case in which the patentee appears to have misunderstood the effect of using the word “means” in the patent and carelessly added the word “means.” E.g., Cole, 102 F.3d at 531 (“The drafter of claim 1 in the ‘239 patent was clearly enamored of the word ‘means’ . . . the claim drafter’s perfunctory addition of the word ‘means’ did nothing to diminish the precise structural character of this element.”). Instead, in some claims of the ‘480 patent, the patentee used the different variations of the term “switch means,” e.g., ‘480 pat., col. 8, lns. 48-49, 57; col. 9, lns. 2, 10, 26 and 64; col. 11, lns. 10-11 and 20, while in others he used only the term “switch,” e.g., id., col. 9, ln. 56; col. 12, ln. 13. Accordingly, I find that the patentee chose to use the term “switch means” to invoke a means-plus-function limitation.

Construing “first switch means” begins with defining its function: **connecting the energy source with the primary light source, which permits selective illumination of the primary light source.** Next, I must determine what structures found in the specification are clearly linked to the claimed function. The specification states that

the first switch means 36 is a conventional vehicle parking/headlamp switch 38 with low/high beam selector 40 on the vehicle instrument panel. The first switch means 36 is of the type that has a first position for illuminating the vehicle parking lights 26 and 28, has a second position for illuminating the low beam lights 42 and 43 of the vehicle headlamps 14 and 16 while continuing to illuminate [sic] the vehicle parking lights 26 and 28, and has a third position for illuminating the high beam lights 44 and 45 of the vehicle

headlamps 14 and 16 while continuing to illuminate the vehicle parking lights 26 and 28.

‘480 pat., col. 2, lns. 32-43. The specification provides this one embodiment of the “first switch means.” Thus, the structures clearly linked to performance of the claimed function are: **a three position conventional vehicle parking/headlamp switch with low/high beam selector and its equivalents.**

Including the function of each position on the switch, as defendant proposes, would improperly restrict the means-plus-function limitation by including functions not explicitly found in the claim. Creo Products, Inc., 305 F.3d at 1346. Accordingly, the switch function at each position, as listed in the specification, is not included in the proper construction of “first switch means.”

4. Second switch means

The parties’ disputes regarding “second switch means” in claims 1, 2, 9 and 16 of the ‘480 patent are the same as their disputes regarding “first switch means.” I need not repeat the analysis of those arguments. Suffice it to say, “second switch means” is a means-plus-function limitation for the same reasons as “first switch means”: the use of the term “means” raises the means-plus-function presumption and the claims language does not provide sufficient structure to overcome the presumption.

As for the construction of “second switch means,” the first step is determining the claimed function. There are some slight variations in function between some of the independent claims. According to claims 1 and 16, the claimed function is to **interrupt the primary light circuit and complete the secondary light circuit by connecting the energy source to the secondary light source so that the secondary light source is illuminated and the primary light circuit is not illuminated**. According to claim 2, the claimed function is to **interrupt the primary circuit from the energy source to the primary light source and complete the secondary circuit light circuit from the energy source to the secondary light source**. According to claim 9, the claimed function is to **selectively control the illumination of the vehicle headlamp means and the accessory unit headlamp means by connecting the energy source to the vehicle headlamp means when the first switch means is activated and when the coupling means is not electrically connecting the wiring harness to the accessory unit and by connecting the energy source to the accessory unit headlamp means when the first switch means is activated and when the coupling means is electrically connecting the wiring harness to the accessory unit**.

The specification refers to one embodiment of the “second switch means” that engages all the above functions, which all interrupt the primary light circuit and complete the secondary light circuit to illuminate the secondary light source and de-illuminate the

primary light source. It is the same embodiment referred to in my construction of “switching means” as used in claims 7 and 18. ‘480 pat., col. 4, lns. 33-36. Thus, the structures that engage in the claimed functions are **first and second relays of a single pole double throw type and their equivalents**. I note that how the “second switch means” is activated is an additional element of each claim that is not part of the structure and need not be included in a proper construction of the term. Construing the claim term to include such information would be superfluous. The requirement of an activation element is present in the claim without any additional construction by the court.

Finally, I note that although the construction of “second switch means” does not follow the doctrine of claim differentiation, which states that different claims should be presumed to cover different inventions, this divergence is proper under the current circumstances. An example of the divergence can be seen in claim 10, which is dependent from claim 9, and covers “[t]he wiring harness as set forth in claim 9 wherein said second switch means includes a relay.” Id., col. 10, lns. 39-40. Because “second switch means” as used in claim 9 already includes first and second relays, dependent claim 10 would not cover a new invention.

The doctrine of claim differentiation “is not a rigid rule but rather [] one of several claim construction tools.” ICU Medical, Inc. v. Alaris Medical Systems, Inc., 558 F.3d 1368, 1376 (Fed. Cir. 2009). In fact, the Court of Appeals for the Federal Circuit has explained

that

the judicially developed guide to claim interpretation known as ‘claim differentiation’ cannot override the statute. A means-plus-function limitation is not made open-ended by the presence of another claim specifically claiming the disclosed structure which underlies the means clause or an equivalent of that structure. . . . [O]ne cannot escape th[e] mandate [of § 112 ¶6] by merely adding a claim or claims specifically reciting such structure or structures.

Laitram Corp v. Rexnord, Inc., 939 F.2d 1533, 1538 (Fed. Cir. 1991). Therefore, the construction of “second switch means” is proper because it is a means-plus-function limitation and the specification provides only one embodiment of the corresponding structures.

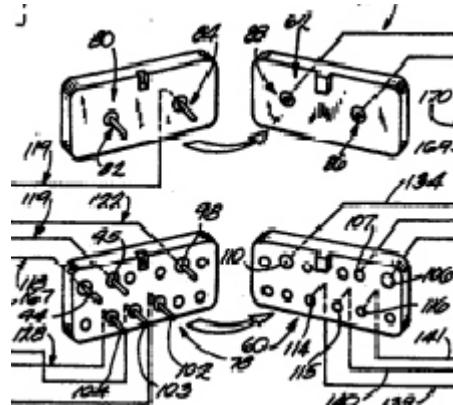
5. Coupling means

The parties dispute whether the term “coupling means” as used in claims 1, 2, 7, 9 and 16 of the ‘480 patent is a means-plus-function limitation. The claims’ use of the word “means” raises the presumption that the limitation is means-plus-function. Plaintiff contends that the word “coupling” provides sufficient structure to overcome the presumption, placing the limitation outside the scope of § 112 ¶6. Plaintiff is mistaken.

All the relevant claims provide for the same element: “a coupling means for selectively connecting and disconnecting said accessory unit to said vehicle.” E.g., ‘480 pat., col. 8, lns. 53-54; col. 9, lns. 6-7. As with “switch,” “coupling” can refer to a device defined

by its function. E.g., New Oxford American Dictionary 388 (2d ed. 2005) (“a device for connecting parts of machinery”). However, the remainder of the claim language does not provide any additional information about the proper structure for the coupling means, other than the function of the coupling. Moreover, “coupling” needs to be narrowed to some structure because the term standing alone could encompass too many structures that do not fall in line with the invention. For example, a screw and bolt connecting two steel plates could connect and disconnect the accessory unit to the vehicle. However, it is clear from the patent that such a coupling would fall outside the scope of the invention, which intended to use the “coupling means” as a way to connect the electrical circuits of the accessory unit to the vehicle’s energy source. ‘480 pat., col. 3, lns. 34-35. Therefore, “coupling means” is a means-plus-function limitation.

According to the claims, a “coupling means” functions to **selectively connect and disconnect the accessory unit to the vehicle**. The only “coupling means” described in the specification are conventional “female and male plow plugs **60** and **78**” and “female and male batter plugs **62** and **80**.⁷ Id., col. 3, lns. 36-39. Figure 2 provides a visual representation of these type of plugs:



pin plug. Id., col. 3, lns. 57-68 and col. 4, 1-5. The specification notes that the function of the other six pins is not explained because “they are not part of the operation of the invention.” Id., col. 4, lns. 4-5. Accordingly, including the specific plugs listed in the specification would read in functions not listed explicitly in the claims.

E. The ‘700 Patent

1. Snowplow blade fixed to the A-frame

I conclude that the term “snowplow blade fixed to the A-frame” as used in claims 1, 38 and 45 of the ‘700 patent does not need construction because its plain and ordinary meaning is easily discernible from the claim language. The term is clear and nothing in the claim language or the specification requires a special definition. Therefore, the plain and ordinary meaning controls. Northern Telecom Ltd., 215 F.3d at 1295. I note that defendant’s proposed construction seeks to impose limitations from the specification, such as a requirement that the blade be attached directly to the A-frame without any intermediate structures. Such limitations do not appear in the claims themselves and nothing suggests that the patentee was attempting to give a narrower construction to “fixed to” than the plain and ordinary meaning of the term. Such a construction would be improper. Golight, 355 F.3d at 1331 (“[L]imitations from the specification are not to be read into the claims.”).

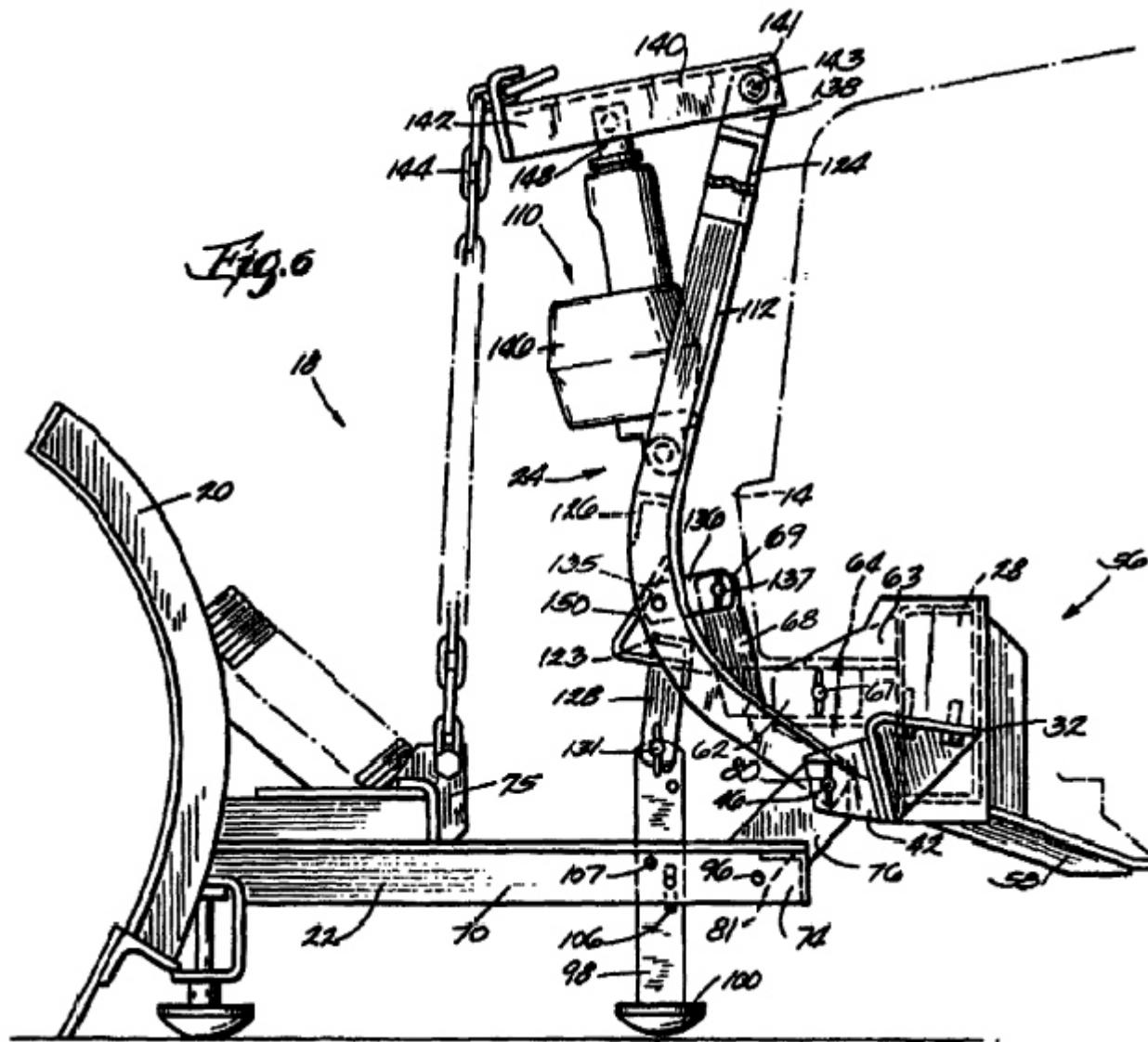
2. Mounting means

The parties agree that the term “mounting means” as used in claims 1 and 38 of the ‘700 patent is a means-plus-function limitation to which § 112 ¶6 applies. The first step in construing “mounting means” is to define the claimed function. The parties do not dispute the claimed function, which I agree is to **selectively connect the A-frame to the mounting frame for pivotal movement about a generally horizontally extending pivot axis and afford removal of the A-frame and the lift frame from the mounting frame as a unit so as to leave the mounting frame on the vehicle and behind the bumper.** Their dispute concerns the corresponding structures.

To find those structures, it is helpful to break down the claimed function into two parts and find the structures clearly linked to each part of the function. The first part of the claimed function is to selectively connect the A-frame to the mounting frame for pivotal movement about a generally horizontally extending pivot axis. The specification provides one embodiment of structures performing this portion of the claimed function:

A pair of hinge pins **80** can be inserted into the aligned pin holes **47, 78** to join the mounting lugs **42** and mounting plates **76** to afford *pivotal rotation* of the A-frame **22** relative to the mounting frame assembly **16** about the pivot axis **46**.

‘700 pat., col. 7, lns. 48-52. (Emphasis added.) Figure 6 illustrates the relevant structures:



Thus, the structures clearly linked to the claimed function are **two lugs**, each consisting of a pair of vertical plates with hinge pin holes, two plates with hinge pin holes, two hinge pins and their equivalents.

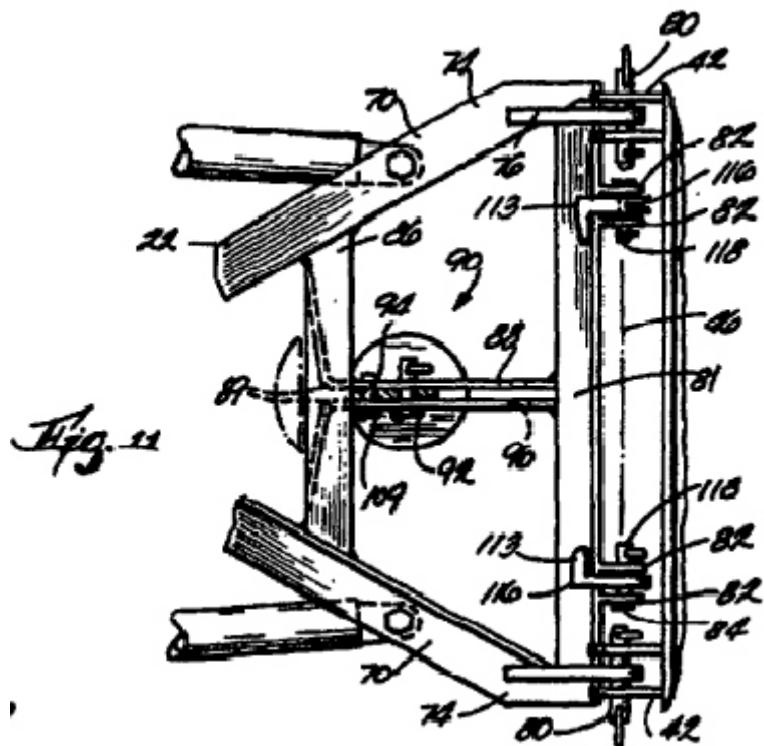
Defendant contends that the location of the mounting lugs and plates should be included as part of the claimed structures because the location is part of the only embodiment of the claimed function. It is true that the only embodiment in the specification, as well as all the figures, places the lugs on the mounting frame and the plates on the A-frame. E.g., id., col. 7, lns. 34-48. However, nothing in the claim language or the specification clearly links the location of the lugs or the plates to the claimed function. For example, there is no language suggesting that pivotal movement would be hindered by placing the lugs on the A-frame instead of on the mounting frame. Therefore, including the location of the lugs and plates in the corresponding structures would not be proper.

The second part of the claimed function is to allow the A-frame and the lift frame to be removed from the mounting frame as a unit so as to leave the mounting frame on the vehicle and behind the bumper. Defendant correctly contends that the same structures associated with the first portion of the claimed function are the structures corresponding to the second portion, but it ignores the additional structures clearly linked to the second portion. According to the specification, “the frame assembly 24 is pivotally connected to the A-frame base member 81 so that the snowplow assembly 18 and the lift frame assembly 24 can be removed from the vehicle as a unit.” Id., col. 9, lns. 1-5. The lift frame’s pivotal connection to the A-frame base is what permits the A-frame and lift frame to be removed as a unit.

The specification explains how the A-frame and lift frame are connected as follows:

The lower portions 113 of each side member 112 have fixed thereto a lift frame mounting plate 115 having a bolt hole 116 there-through so as to align with the bolt holes 84 in the lift frame clevises 82 and so as to be coaxially aligned with pivot axis 46. Bolt 118 (shown only in FIG. 11) pivotally connects lower portions 113 of side members 112 and base member 81 of A-frame 22 so that the lift frame assembly 24 is pivotable about the pivot axis 46 relative to the A-frame 22

Id., col. 9, lns. 13-22. Figure 11 provides an illustration of some of the additional relevant structures not visible in Figure 6:



Thus, the structures clearly linked to the second portion of the claimed function are **two plates with bolt holes, two clevises, two bolts and their equivalents.** (Neither party explains what a clevis is. However, I believe it is easier to understand how the patented invention functions when the ordinary meaning of the term is provided. A clevis is “a U-shaped or forked metal connector within which another part can be fastened by means of a bolt or pin passing through the ends of the connector.” New Oxford American Dictionary 318 (2d ed. 2005). An illustration of a clevis further helps in understanding the structure:



<http://commons.wikimedia.org/wiki/File:Clevis.svg> (last visited March 1, 2010).)

Defendant contends that the pivotal connection between the A-frame and lift frame is not part of the claimed function and thus, the structures involved in that function are not clearly linked to the claimed function. I disagree. Connection of the A-frame and lift frame is part of the claimed function. If they were not connected, they could not be removed as a unit. Further, although a pivotal connection is not necessary to allow the structure to engage in the claimed function, it is permissible for structures to engage in more than one function. Thus, the structures connecting the A-frame and lift frame are clearly linked to

permit their removal as a unit.

3. Support frame

Defendant points out that plaintiff failed to propose a construction for “support frame” as used in claim 45 of the ‘700 patent when the parties had their exchange of terms and proposed constructions in October 2009. Def.’s Resp. Br., dkt. #86, at 12-13. Because plaintiff has violated the preliminary pretrial conference order, dkt. #11 at 2, the construction that it proposed in its initial claims construction brief cannot be considered at this time.

Regardless of plaintiff’s proposed construction, defendant does not provide a construction of its own. Instead, it seeks to have claim 45 invalidated by contending that “support frame” is an indefinite term. The Court of Appeals for the Federal Circuit has explained that

Under 35 U.S.C. § 112, claims must “particularly point[] out and distinctly claim[] the subject matter which the applicant regards as his invention.” If a claim fails to reasonably apprise one skilled in the art of the boundaries of the claim when read in light of the specification, then the claim is invalid under § 112 for indefiniteness.

580 F.3d 1340, 1371 (Fed. Cir. 2009). Nonetheless, a patent’s claims are presumed to be valid and establishing invalidity requires the party seeking to invalidate the patent claim to prove invalidity by clear and convincing evidence. Aero Products International, Inc. v. Intex

Recreation Corp., 466 F.3d 1000, 1015 (Fed. Cir. 2006). Thus, invalidity of a patent's claim based on indefiniteness is better dealt with at summary judgment. I will reserve ruling on "support frame" until then.

F. The '530 Patent

1. Means for releasably connecting the lift frame to the mount frame

The parties agree that the term "means for releasably connecting the lift frame to the mount frame" as used in claims 1 and 10 of the '530 patent is a means-plus-function limitation to which § 112 ¶6 applies. The first step in construing the term is to define the claimed function. The parties do not dispute the claimed function. The relevant claim language provides:

the lift frame including . . . means for releasably connecting the lift frame to the mount frame affording removal of the lift assembly from the mount frame as a single unit so as to leave the mount frame on the vehicle.

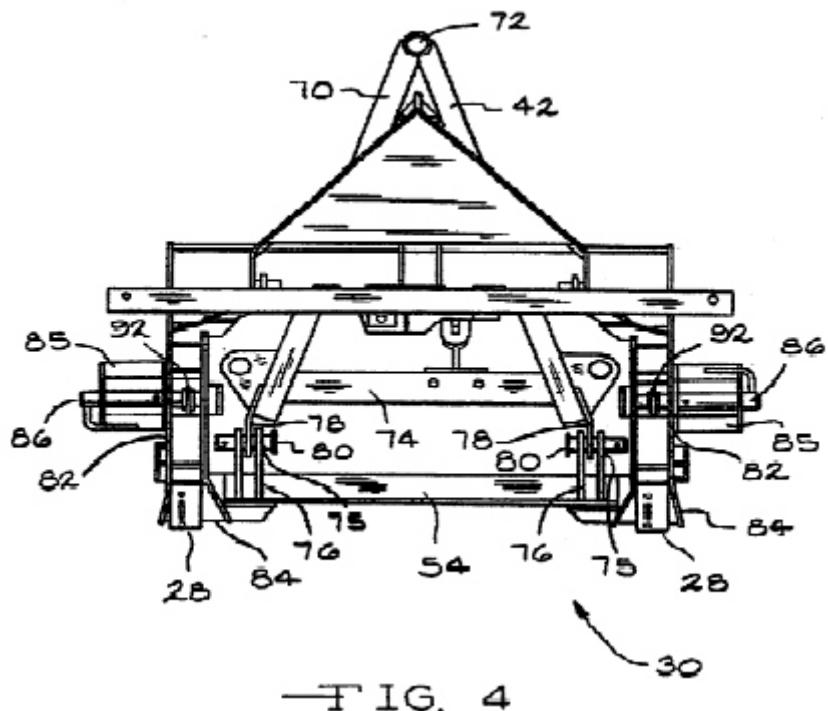
'530 pat., col. 6, lns. 23-30. Accordingly, the claimed function is **releasably connecting the lift frame to the mount frame affording removal of the lift assembly from the mount frame as a single unit so as to leave the mount frame on the vehicle**. The parties' dispute lies in the corresponding structures.

The specification sets out one embodiment of the claimed function:

Lower support 54 further includes means 82 for connecting lift assembly 30

to mount frame 28. In the embodiment illustrated in FIG. 4, connecting means 82 includes a pair of U-shaped channels 84 and a pair of lugs 85 each for carrying a spring biased retractable pin 86 connected to the outside of each of the channels.

'530 pat., col. 4, lns. 42-48. Figure 4 illustrates the described structures:



Thus, the structures clearly linked to the claimed function are a pair of U-shaped spaced channels, a pair of lugs each carrying a spring biased retractable pin and their equivalents.

Defendant contends that additional structures should be included in construing the term. Specifically, defendant contends that the structures associated with the mount frame

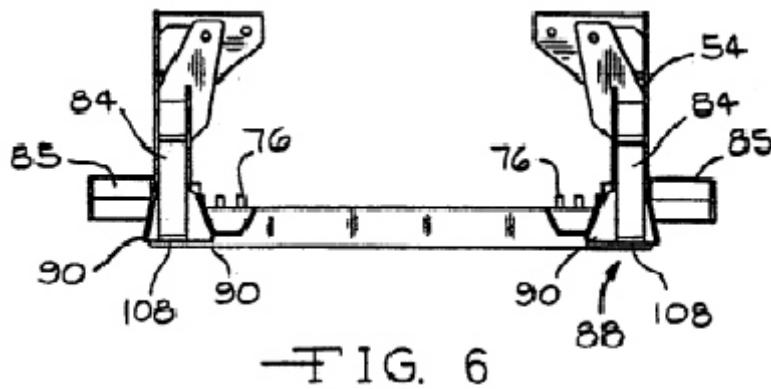
are necessary to perform the claimed function. It is true that for the lift frame to connect to the mount frame, the mount frame must have structures that fit with the lift frame. However, viewing the term at issue in the context of claims 1 and 10, it is clear that “means of connecting” refers to portions included with the lift frame. Both claims 1 and 10 refer to “a snow plow assembly, comprising: . . . a mount frame . . . a lift assembly including . . . a lift frame . . . the lift frame including . . . means for releasably connecting . . .” ‘530 pat., claims 1 and 10. Therefore, the structures associated with the mount frame are not clearly linked to the claimed function, which is associated with only the lift frame.

2. A pair of spaced guides tapering in an outwardly direction

I conclude that the term “a pair of spaced guides tapering in an outwardly direction” as used in claim 10 of the ‘530 patent means **two spaced guides, each tapering in a direction away from the centerline of the U-shaped channel on which it is located.** The parties dispute whether both spaced guides need to taper outwardly. Plaintiff contends that they don’t and defendant contends that they do. Defendant has the more persuasive position.

Nothing in the claim language itself allows the inference that the language “tapering in an outwardly direction” refers to only one of the pair of spaced guides. If the patentee intended such a meaning, he should have claimed “a pair of spaced guides *at least one of which*

tapers in an outwardly direction." The most reasonable construction from reading the claim language is that *both* guides taper in an outwardly direction. This reading has further support in the specification, which discusses "a pair of spaced guides 90, each guide tapering in an outwardly direction," '530 pat., col. 5, lns. 1-2, and the illustrations of the invention:



Plaintiff contends that the prosecution history of the '530 patent supports its construction. However, nothing in the prosecution history changes the claim language. Plaintiff notes that an earlier version of the '530 patent contained a dependent claim 12 that stated:

12. The snow plow assembly of claim 6 wherein the alignment means includes a pair of spaced guides,
each of the guides tapering in an outwardly direction.

Olejniczak Decl., dkt. #17, exh. B, at DD 000143. Eventually claim 12 was removed from the patent, but the language in claim 12 was reworked into what is now independent claim

10, which no longer contains the “each of the guides” language. It is important to note that the patentee was not told to change claim 12 for validity reasons.

Contrary to plaintiff’s argument, removal of the “each of the guides” language does not support the conclusion that the “tapering in an outwardly direction” was intended to apply to at least one of a pair of spaced guides. A more reasonable view of the removal of the “each of the guides” language is that the phrase was removed because it was superfluous and unnecessary. In creating independent claim 10, the “each of the guides” language would not have added anything but extra words because the phrase “a pair of spaced guides tapering in an outwardly direction” covered the same invention without the extra phrase.

3. Means for pivotally connecting the rear end of the A-frame to the lift frame

The term “means for pivotally connecting the rear end of the A-frame to the lift frame” as used in claims 1 and 10 of the ‘530 patent is a means-plus-function limitation to which § 112 ¶6 applies. Plaintiff does not propose a claimed function. Defendant proposes what I find to be the correct claimed function. The relevant claim language provides:

the lift frame including means for pivotally connecting the rear end of the A-frame to the lift frame whereby the A-frame is free to rotate relative to the lift frame.

‘530 pat., col. 6, Ins. 23-26; col. 8, Ins. 5-8. Accordingly, the claimed function is **pivotally connecting the rear end of the A-frame to the lift frame.**

The specification provides one embodiment of the claimed function:

Lower support 54 includes means 75 such as a pair of spaced clevises 76 for connecting the rear end 74 of A-frame 42 to lower support 54. Each side of rear end 74 of A-frame 42 includes a flange 78 having an opening, each flange pivotally connect to one of [sic] clevises 76 by a pin 80.

Id., col. 4, lns. 34-39. Figure 4, which is depicted previously in this opinion, illustrates the relevant structures. Therefore, the structures clearly linked with the claimed function are a **pair of spaced clevises and pins.**

As with the term “means for releasably connecting,” defendant contends that a proper construction of the term “means for pivotally connecting” should contain the connecting structures not only on the lift frame but the A-frame as well. Defendant is mistaken for the same reasons it was mistaken regarding “means for releasably connecting.” The claimed function is limited to structures on the “lift frame.” It is not reasonable to say that the lift frame includes structures found on the A-frame. The structures on the A-frame are part of the A-frame and the structures on the lift frame are part of the lift frame. Looking at the claim language from another perspective helps express why the structures are separate. To obtain the same result, the claim could be rewritten to state, “the lift frame’s means for pivotally connecting the rear end of the A-frame to itself.” In other words, the claimed function is limited to the lift frame’s use of the function. Therefore, the court’s construction properly limits the term without including the A-frame’s connecting structures.

G. The '978 Patent

1. Generally parallel to the longitudinal axis

I conclude that the term “generally parallel to the longitudinal axis” as used in claims 28, 53 and 57-59 of the ‘978 patent does not need construction because its plain and ordinary meaning is easily discernible from the claim language. Nothing in the claim language or the specification requires a special definition. Therefore, the plain and ordinary meaning controls. Northern Telecom Ltd., 215 F.3d at 1295. Nonetheless, I note that defendant’s proposed construction would not fit into the ordinary meaning of the term.

Defendant contends that a proper construction of the term should include the limitation “without rotation in a direction perpendicular to that axis.” It is helpful to read the term in context, which includes the following language:

one of said mount frame and said snowplow frame having first and second arms and the other of said mount frame and snowplow frame having first and second receivers, said first and second receivers receiving said first and second arms, respectively upon relative movement therebetween in a direction generally parallel to the longitudinal axis of the vehicle.

E.g., ‘978 pat., col. 10, lns. 15-21; col. 14, lns. 8-14. “Generally parallel to the longitudinal axis” describes the direction of movement between the first and second arms and first and second receivers of two different frames that are being connected. The specification provides an example of this purpose of this movement:

For both attaching the snowplow assembly 12 to and detaching the snowplow

assembly **12** from the mount assembly **14** a force should be applied to the lift frame **22**, such as on traverse element **44**, in the direction of the mount assembly **14** as latch lever **160** is rotated. Such movement facilitates alignment of the latch pins **102, 104** with the holes **94** in the arms **92**.

Id., col. 7, lns. 21-27. Thus, the movement in a direction “generally parallel to the longitudinal axis” of the vehicle is to facilitate alignment of the latch pins with the holes in the arms so that the mount frame and snowplow frame can be connected.

Neither the claim language nor the specification permits the inference that “generally parallel to the longitudinal axis” means “without rotation in a direction perpendicular to that axis.” First, the claim language uses the word “generally” which leaves open the possibility that the movement will occur in a direction other than perfectly parallel to the longitudinal axis. Second, it would defeat the purpose of the invention to construe the term as excluding any movement in a direction perpendicular to the longitudinal axis of the vehicle. In aligning the latch pins with the arm holes, it is possible that if the arm holes were slightly below the latch pin alignment, force on the snowplow assembly could tilt the arms upward, that is, perpendicular to the longitudinal axis of the vehicle, while moving the arms into the receivers to align the holes with the pins. Finally, defendant fails to point to any language that prohibits perpendicular movement. Thus, the claim language is broad enough to include some movement in a direction perpendicular to the longitudinal axis of the vehicle. Defendant’s proposed meaning would prevent such movement, making it improper.

H. Scheduling Order

Under the preliminary pretrial conference order, dkt. #11, the parties' disclosures of liability experts were due February 26, 2010, with responses due March 26, 2010. The deadline for filing dispositive motions is April 12, 2010. Because this claims construction opinion and order affects any expert disclosures and dispositive motions involve expert disclosures, those three deadlines will be extended as follows: (1) initial disclosure of liability experts are due March 22, 2010; (2) responsive reports are due April 19, 2010; and (3) dispositive motions are due May 3, 2010.

ORDER

IT IS ORDERED that

1. The disputed claim terms of United States Patent No. 4,999,935 are construed as follows:
 - “means for mounting said plow blade” as used in claim 1 of the ‘935 patent is a means-plus-function limitation that performs the following function: **attaching the plow blade to the vehicle in a manner that permits vertical and horizontal movement.** The term covers the following structures and their equivalents: **a frame, including an A-frame and an additional frame portion, attached to a plow blade using a pin and attached to a vehicle**

using pins, an extension, a chain and a lever arm.

- “a hydraulic power unit” as used in claim 1 of the ‘935 patent means **a group of hydraulic components, including a hydraulic fluid reservoir, a pump and lift hydraulic cylinder.**
- “means defining fluid flow passages in said manifold” as used in claim 1 of the ‘935 patent is a means-plus-function limitation that performs the following function: **defining fluid flow passages that communicate with the hydraulic cylinder means.** The term covers the following structures and their equivalents: **those set forth in Figures 3A, 3B and 4 through 7 and listed in column 5, lines 38 through 68 and column 6, lines 1 through 11 of the ‘935 patent.**

2. The disputed claim terms of United States Patent No. 5,420,480 are construed as follows:

- “switching means” as used in claim 7 of the ‘480 patent is a means-plus-function limitation that performs the following function **interrupting the primary circuit and connecting the secondary light circuit to the energy source so that the secondary light source is selectively energizable and the primary circuit is de-energized.** The term covers the following structures and their equivalents: **first and second relays of a single pole**

double throw type.

- “switching means” as used in claim 18 of the ‘480 patent is a means-plus-function limitation that performs the following function: **interrupting the primary circuit and connecting the energy source to the secondary light source so that the secondary light source is selectively energizable in response to the switch.** The term covers the following structures and their equivalents: **first and second relays of a single pole double throw type.**
- “first switch means” as used in claims 1, 2, 9 and 16 of the ‘480 patent is a means-plus-function limitation that performs the following function: **connecting the energy source with the primary light source, which permits selective illumination of the primary light source.** The term covers the following structures and their equivalents: **a three position conventional vehicle parking/headlamp switch with low/high beam selector.**
- “second switch means” as used in claims 1 and 16 of the ‘480 patent is a means-plus-function limitation that performs the following function: **interrupting the primary light circuit and completing the secondary light circuit by connecting the energy source to the secondary light source so that the secondary light source is illuminated and the primary light**

circuit is not illuminated. The term covers the following structures and their equivalents: **first and second relays of a single pole double throw type.**

- “second switch means” as used in claim 2 of the ‘480 patent is a means-plus-function limitation that performs the following function: **interrupting the primary circuit from the energy source to the primary light source and completing the secondary circuit light circuit from the energy source to the secondary light source.** The term covers the following structures and their equivalents: **first and second relays of a single pole double throw type.**
- “second switch means” as used in claim 9 of the ‘480 patent is a means-plus-function limitation that performs the following function: **selectively controlling the illumination of the vehicle headlamp means and the accessory unit headlamp means by connecting the energy source to the vehicle headlamp means when the first switch means is activated and when the coupling means is not electrically connecting the wiring harness to the accessory unit and by connecting the energy source to the accessory unit headlamp means when the first switch means is activated and when the coupling means is electrically connecting the wiring**

harness to the accessory unit. The term covers the following structures and their equivalents: **first and second relays of a single pole double throw type.**

- “coupling means” as used in claims 1, 2, 7, 9 and 16 of the ‘480 patent is a means-plus-function limitation that performs the following function: **selectively connecting and disconnecting the accessory unit to the vehicle.** The term covers the following structures and their equivalents: **conventional female and male plow plugs and female and male battery plugs.**

3. The disputed claim terms of United States Patent No. RE 35,700 are construed as follows:

- “mounting means” as used in claims 1 and 38 of the ‘700 patent is a means-plus-function limitation that performs the following function: **selectively connecting the A-frame to the mounting frame for pivotal movement about a generally horizontally extending pivot axis and affording removal of the A-frame and the lift frame from the mounting frame as a unit so as to leave the mounting frame on the vehicle and behind the bumper.** The term covers the following structures and their equivalents: **two lugs, each consisting of a pair of vertical plates with hinge pin holes,**

two plates with hinge pin holes, two hinge pins, two plates with bolt holes, two clevises and two bolts.

4. The disputed claim terms of United States Patent No. 5,353,530 are construed as follows:

- “means for releasably connecting the lift frame to the mount frame” as used in claims 1 and 10 of the ‘530 patent is a means-plus-function limitation that performs the following function: **releasably connecting the lift frame to the mount frame affording removal of the lift assembly from the mount frame as a single unit so as to leave the mount frame on the vehicle.** The term covers the following structures and their equivalents: **a pair of U-shaped spaced channels, a pair of lugs each carrying a spring biased retractable pin.**
- “a pair of spaced guides tapering in an outwardly direction” as used in claim 10 of the ‘530 patent means **two spaced guides, each tapering in a direction away from the centerline of the U-shaped channel on which it is located.**
- “means for pivotally connecting the rear end of the A-frame to the lift frame” as used in claims 1 and 10 of the ‘530 patent is a means-plus-function limitation that performs the following function: **pivotally connecting the**

rear end of the A-frame to the lift frame. The term covers the following structures and their equivalents: **a pair of spaced clevises and pins.**

5. The other disputed claim terms addressed in this opinion retain their plain and ordinary meaning.
6. Defendant's request that the opinions of plaintiff's expert, Dr. Charles Garris, be excluded from consideration in construing the patent terms is DENIED.
7. The deadlines for expert witness disclosures and dispositive motions are extended as follows: (1) initial disclosure of liability experts March 22, 2010; (2) responsive reports April 19, 2010; and (3) dispositive motions May 3, 2010.

Entered this 2nd day of March, 2010.

BY THE COURT:

/s/

BARBARA B. CRABB
District Judge